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8 Attorneys for Defendant  
9 SIMMONS BEDDING COMPANY  
10 and Defendant and Counterclaimant DREAMWELL, LTD.

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

ZINUS, INC. a California Corporation,

Case No. 07-CV-03012-PVT

Plaintiff,

**EXPERT DECLARATION OF MICHAEL  
S. DEFRAKNS IN OPPOSITION TO  
PLAINTIFF ZINUS INC.'S MOTION FOR  
SUMMARY ADJUDICATION OF NON-  
INFRINGEMENT**

v.  
SIMMONS BEDDING COMPANY, a  
Delaware corporation, and DREAMWELL,  
LTD., a limited liability company of  
Nevada,

**Date:** December 11, 2007  
**Time:** 10:00 a.m.  
**Before:** The Honorable Patricia V. Trumbull  
**Location:** Courtroom 5

Defendants.

AND RELATED COUNTERCLAIMS

I, Michael S. DeFranks, declare:

1. I am the Director of Engineering for Simmons Bedding Company ("Simmons"). I have been asked by outside counsel for Dreamwell to analyze whether a portion of plaintiff Zinus, Inc.'s ("Zinus") Swirl Wrap packaging process for its Mattress-in-a-Box products is equivalent to the claim element "inserting said evacuation tube into a containment sleeve . . ." in

1 the claims of U.S. Patent No. RE 36,142 (the “142 Patent”). I have personal knowledge of the  
2 facts set forth in this Declaration and can testify competently to those facts.

3 **Background and Qualifications**

4 2. I am a mechanical engineer by training, and have a Bachelors of Mechanical  
5 Engineering that I received from the Georgia Institute of Technology.

6 3. I started my career in high speed metal manufacturing with Copeland Scroll  
7 Compressors, a world leader in design and production of refrigeration compressors. My next  
8 assignment was with Makita Corporation, a leading global producer of professional grade electric  
9 power tools, where I designed and implemented automated machining processes.

10 4. I have been with Simmons for over 12 years. During that time, I have worked in a  
11 variety of engineering and leadership roles relating to Simmons’ bedding products, with focus in  
12 the areas of machine design, material science and flammability research and development.

13 5. I currently serve as Chairman of the Sleep Product Safety Council (SPSC), and I  
14 was a SPSC board member for three years prior to that appointment.

15 6. I am presently named as an inventor on the following seven United States Patents  
16 relating to Simmons bedding products: United States Patent No. 5,974,993, entitled “Quilted  
17 Border Winder Apparatus, System and Method,” which issued on November 2, 1999; U.S. Patent  
18 No. 6,493,887, entitled “Box Spring Corner Guard,” which issued on December 17, 2002; U.S.  
19 Patent No. 6,687,929, entitled “Box Spring Corner Guard,” which issued on February 10, 2004;  
20 U.S. Patent No. 6,931,685, entitled “One Sided Mattress,” which issued on August 23, 2005; U.S.  
21 Patent No. 7,047,581, entitled “Stranded Mattress Spring,” which issued on May 23, 2006; U.S.  
22 Patent No. 7,168,117, entitled “Multi-Stranded Coil Spring,” which issued on January 30, 2007;  
23 and U.S. Patent No. 7,174,613, entitled “Method for Manufacturing a Foam Core Having Channel  
24 Cuts,” which issued on February 13, 2007. I am also the inventor on several pending patent  
25 applications relating to Simmons’ bedding products. As a result, I am familiar with the United  
26 States patent system, and am generally familiar with how patents should be interpreted.

1     **Summary of Opinions**

2       7.     For purposes of this Declaration, I was asked to form an opinion as to whether the  
3     Zinus Swirl Wrap process contains a step or steps that are the equivalent of the '142 Patent claim  
4     element "inserting said evacuation tube into a containment sleeve . . ." (the "containment sleeve  
5     element"). More specifically, I was asked for an opinion as to whether the combination of  
6     placing a compressed mattress and its surrounding evacuation tube onto a rectangular sheet of  
7     reinforced fabric, rolling the mattress up inside the fabric, and applying ribbon shaped tape or  
8     plastic stripping to the outside of the fabric to hold the roll in place performs substantially the  
9     same function as the containment sleeve element of the claims of the '142 Patent; whether it  
10    performs this function in the same way as the containment sleeve element of the '142 Patent; and  
11    whether it achieves the same result as the containment sleeve element of the claims of the '142  
12    Patent.

13       8.     In forming the opinions set forth in this Declaration, in order to obtain an  
14    understanding of the claim element at issue, I have reviewed the '142 Patent, as well as the  
15    prosecution history of the patent.

16       9.     In forming the opinions set forth in this Declaration, in order to obtain an  
17    understanding of Zinus' Swirl Wrap process, I have reviewed the Declaration of Scott Reeves, the  
18    exhibits to that Declaration (which include photographs of various steps in that process), the  
19    transcript of the deposition of Scott Reeves, and certain Zinus documents.

20       10.    Based on my review and analysis of the '142 Patent and related documentation, as  
21    well as my knowledge and analysis of the Swirl Wrap process, it is my opinion that the Swirl  
22    Wrap process contains the equivalent of the containment sleeve element of the '142 Patent, in that  
23    it performs substantially the same function as that element, in substantially the same way, to  
24    obtain substantially the same result.

25     **Opinion Regarding the Swirl Wrap Process**

26       11.    It is my understanding that for purposes of determining patent infringement, a  
27    patent owner can show that a claim element is satisfied under the doctrine of equivalents if the  
28    patent owner demonstrates that the accused product or process performs substantially the same

1 function as the claim element at issue, in substantially the same way, to achieve substantially the  
2 same result.

3       12. In my opinion, the primary function of the containment sleeve element is to  
4 prevent or restrict the expansion of the compressed mattress during shipping. My opinion is  
5 based in part on my understanding of the term "containment sleeve". I understand that term to  
6 generally refer to a structure or covering designed to protect its contents or prevent or restrict the  
7 contents from expanding.

8       13. My opinion regarding the primary function of the containment sleeve is based in  
9 part on the language of the claims of the '142 Patent. Each claim specifically refers to "a  
10 containment sleeve which is dimensioned and configured to retain said compressed mattress  
11 assembly in a compressed state for shipment." In my opinion, this language indicates that the  
12 purpose of the containment sleeve is to keep the compressed mattress assembly in a compressed  
13 state during shipment.

14       14. My opinion regarding the primary function of the containment sleeve is supported  
15 by other language in the '142 Patent. As just one example, in the Summary of the Invention  
16 section, the function of the containment sleeve is specifically defined as "to maintain the article in  
17 a compressed state."

18       15. My opinion regarding the primary function of the containment sleeve is also  
19 supported by the prosecution history of the '142 Patent. As just one example, in response to the  
20 Examiner's rejection of claims 1-4 in light of Broyles, US Patent 3,611,524, the applicants argued  
21 that "[t]here is no containment sleeve disclosed in Broyles which is intended to maintain the  
22 innerspring in a compressed state after evacuation. The claims of the instant application all call  
23 for such a containment sleeve."

24       16. In my opinion, Zinus' Swirl Wrap process contains steps that perform substantially  
25 the same function as the containment sleeve element of the '142 Patent. In particular, the  
26 combination of placing a compressed mattress and its surrounding evacuation tube onto a  
27 rectangular sheet of reinforced fabric, rolling the mattress up inside the fabric, and applying  
28 ribbon shaped tape or plastic striping to the outside of the fabric to hold the roll in place

1 performs the function of preventing or restricting the compressed mattress from expanding during  
2 shipment.

3       17. My opinion is based on my understanding of the Swirl Wrap process, as set forth  
4 in the Reeves Declaration, the Zinus documents and photographs that I reviewed, and Mr.  
5 Reeves' deposition testimony. As just one example, Mr. Reeves testified at pages 29-30 of his  
6 deposition that "both the flexible film that's reinforced and the strapping material combine  
7 together to give us a strong hold on the mattress." Mr. Reeves also confirmed at pages 32-33 of  
8 his deposition that the reason the ribbon shaped bands were wrapped circumferentially around the  
9 rolled up mattress assembly was because it was believed to be the most effective way to limit the  
10 expansion of the compressed mattress.

11       18. In my opinion, the way in which the containment sleeve element of the '142 Patent  
12 performs the function of preventing or restricting the compressed mattress from expanding during  
13 shipment is by providing a barrier that covers or surrounds a substantial portion of the exposed  
14 surface of the mattress and that is sufficiently strong to resist the internal forces that would tend to  
15 expand the compressed mattress. This opinion is based upon my reading of the '142 Patent and  
16 the prosecution history, as well as my general understanding of how a containment sleeve would  
17 prevent or restrict an item from expanding.

18       19. In my opinion, the Swirl Wrap process also performs the function of preventing or  
19 restricting the compressed mattress from expanding during shipment by providing a barrier that  
20 covers or surrounds a substantial portion of the exposed surface of the mattress (in the form of the  
21 combination of the reinforced fabric sheet and the ribbon-shaped bands of adhesive tape or plastic  
22 stripping) and that is sufficiently strong to resist the internal forces of the compressed mattress.  
23 This opinion is based on my understanding of the Swirl Wrap process, as set forth in the Reeves  
24 Declaration, the Zinus documents and photographs that I reviewed, and Mr. Reeves' deposition  
25 testimony. As just one example, Mr. Reeves testified at pages 40-41 of his deposition that the  
26 reinforced flexible film, in combination with the tape or bands, "[m]inimizes the frictional force  
27 by minimizing the expansion capabilities," and he further testified that placing a compressed  
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mattress into a box without a means to prevent expansion of said compressed mattress, in the event of accidental puncture, could lead to failure of the box.

20. In my opinion, the result achieved by the containment sleeve element of the '142 Patent is that it effectively prevents or restricts the compressed mattress from expanding beyond its final container size during shipment. This opinion is based upon my reading of the '142 Patent and the prosecution history, as well as my general understanding of how a containment sleeve would impact the ability of an item to expand within the sleeve.

21. In my opinion, the Swirl Wrap process also achieves the result of effectively preventing or restricting the compressed mattress from expanding beyond its final container size during shipment. This opinion is based on my understanding of the Swirl Wrap process, as set forth in the Reeves Declaration, the Zinus documents and photographs that I reviewed, and Mr. Reeves' deposition testimony. As just one example, Mr. Reeves testified that at pages 34-35 of his deposition that the compressed mattress, "could potentially expand itself if that plastic bag was punctured and that's what we're trying to limit during the time of shipping from the factory to the time it gets to the stores and consumer's home, we want to make sure that the bed stays nice and contained and secured."

22. Based on my understanding of how a claim element may be met or satisfied under the doctrine of equivalents, as well as analysis of the '142 Patent and Swirl Wrap process as set forth above, it is my opinion that the Swirl Wrap process performs substantially the same function in substantially the same way to achieve substantially the same results as the containment sleeve element of the '142 Patent, and that the Swirl Wrap process therefore meets or satisfies that element under the doctrine of equivalents.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge.

Executed this 20th day of November, 2007 at Atlanta, Georgia.

Michael S. DeFranks /s/

**ATTESTATION PURSUANT TO GENERAL ORDER 45**

I, Kenneth B. Wilson, hereby attest that concurrence in the filing of this document has been obtained from the other signatory.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on November 20, 2007 in San Francisco, California.

/s/

Kenneth B. Wilson